

TACHOMETERS

MOTOR

SOLVERE

Integrating Motor
TACHOMETERS
SIZES 8 and 11

FEATURES

Excellent linearity, $\pm 0.07\%$

Trimmed and calibrated for
stable output voltage over wide
temperature ranges

Low harmonic distortion

Low axis and position nulls

Corrosion Resistant



SOLVERE COMPUTING
MOTOR-TACHOMETERS/SIZE 8 AND 11

SOLVERE MOTOR TACHOMETERS—SIZES 8 and 11/GENERAL INFORMATION

High performance motor-tachometers designed for application as integrators. By utilizing temperature compensating thermistor networks the speed sensitive voltage variation can be maintained to within

fractions of a percent over wide temperature ranges. These components also feature excellent linearity and low axis and position errors.

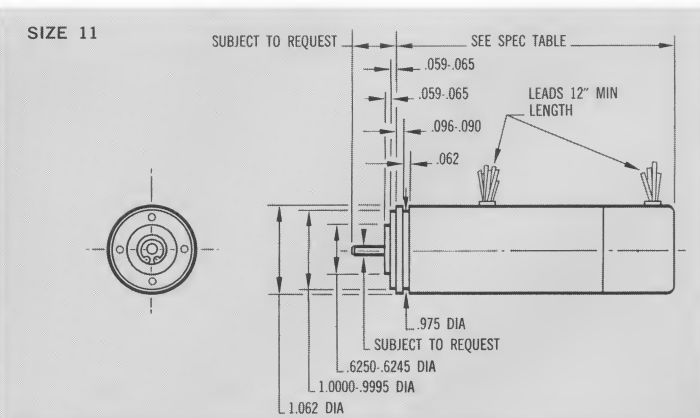
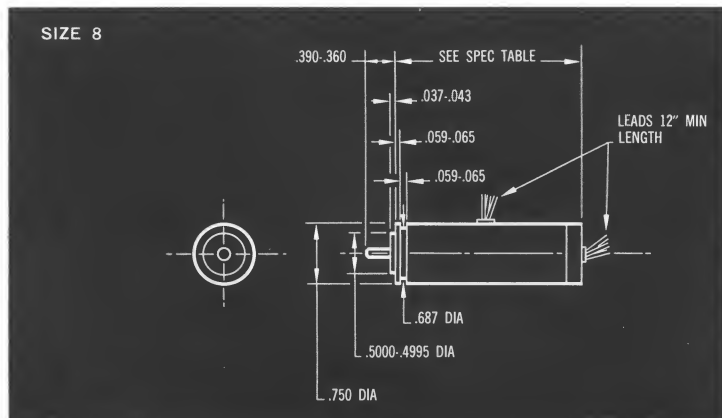
TYPICAL VALUES

	SIZE 8		SIZE 11		
Model	8MT—14	8MT—15	11MT—29	11MT—40, MOD 1	11MT—45
GENERAL CHARACTERISTICS					
Size	8	8	11	11	11
Length (max)	2.606	2.750	3.270	3.653	2.480
Weight (oz)	2.8	3.1	9	8.8	7
Ambient Temp Max (°C) ①	105	105	105	125	105
Rotor Moment of Inertia (gm-cm ²)	2.4	2.4	7.6	7.6	6.6
Theoretical Acceleration (rad/sec ²)	7060	5900	5500	5660	2460
Stall Torque (in-oz)	.245	.2	.61	.63	.23
No Load Speed (rpm) (Tach. Excited)	5500	10,000 (min)	5900	5900	9900
Frequency (cps)	400	800	400	400	800
ELECTRICAL DATA—MOTOR					
Fixed Phase—Excitation Voltage	26	28	115	26	28
Impedance ②	255	206	1250	107	244
Power (watts) ②	1.85	2.5 (max)	3.5	3.6	2.07
Effective R (ohms) ②	366	320	3800	187	379
Control Phase—Excitation Voltage	26	25	33/16.5	26/13	35
Impedance ②	255	165	102/26	107/27	368
Power (watts) ②	1.85	2.5 (max)	3.5	3.6	2.02
Effective R (ohms) ②	366	255	312/78	187/47	606
ELECTRICAL DATA—TACHOMETER					
Excitation Phase—Voltage	26	28	115	115	28
Impedance	271	217	1050 + J1250	1640	304
Power (watts)	1.95	2.5 (max)	5.2	5.2	.98
Effective R (ohms)	347	356	2540	2540	800
Output Volts/1000 rpm	.75	1.0	2.75	2.75 ± 0.1 %	1.0
Phase Shift @ 3600 rpm (min)	0	0	10	10	10
In-Phase Axis Error (mv-max) ③	5	2	3.0	3	2.0
Quadrature Axis Error (mv-max) ③	—	—	5.0	7	—
In-Phase Position Error (mv-max) ③	—	2	1.0	7	1.0
Quadrature Position Error (mv-max) ③	—	—	10.0	25	—
Total Null incl. Harmonics (mv-max) ③	20	8	20	30	8.0
Linearity to 3600 rpm (%)	0.02	0.05	0.05	0.05	0.05 ④
Output Variation with Temp (%)					
0°C to +90°C			±0.25	±0.25	
—55°C to +110°C			±1.0	±0.6	
—15°C to +75°C		±0.5			
—18°C to +135°C	±0.25 %				
—25°C to +75°C					±0.5
Output Impedance	2200 + J2700	10K	3750 + J8300	3750 + J8300	7K + J9K
Load Impedance	80-100K	150K	100K	100K	150K
ENVIRONMENTAL DATA					
All above units will meet requirements of MIL-E-5272					

① Does not include temp. rise of unit ② Measured at stall ③ Measured at 0 rpm ④ 0-8500 rpm

COMPONENTS CAN BE DESIGNED TO MEET YOUR PARTICULAR ELECTRICAL AND MECHANICAL REQUIREMENTS

DIMENSIONS



SOLVERE

Ultra Precision Servo Components

SOLVERE, INC. • 1902 W. CHESTNUT ST. • SANTA ANA, CALIFORNIA • KIMBERLY 7-8027